

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Please cancel claims 1-18 without prejudice or disclaimer.

Please amend claims 19 and 20 as set forth below.

Please add new claims 31-61 as set forth below.

1 Claim 19 (currently amended): A method for detecting ~~of diagnosing in a subject~~
2 ~~a disease characterized by~~ at least one diagnostic marker of a disease comprising the steps of:
3 a) providing a substrate for use in desorption spectrometry that comprises
4 at least one addressable location, each addressable location comprising an adsorbent attached to
5 the substrate wherein the adsorbent ~~that~~ resolves at least one of the diagnostic markers under an
6 elution condition;
7 b) ~~exposing~~ contacting the adsorbent with ~~substrate to~~ a biological sample
8 from the subject;
9 c) washing the adsorbent under the elution condition to allow retention of
10 the diagnostic marker or markers; and
11 d) detecting retained diagnostic marker or markers by desorption
12 spectrometry.;
13 ~~whereby detecting retained diagnostic marker provides a diagnosis of the~~
14 ~~disease.~~

1 Claim 20 (currently amended): The method of claim 19 further comprising
2 detecting ~~wherein diagnosis involves detection of~~ a plurality of diagnostic markers and the
3 addressable locations comprise adsorbents that resolve the plurality of diagnostic markers.

1 Claim 31 (new): The method of claim 19 further comprising providing a
2 diagnosis of the disease based on detection of the diagnostic marker or markers.

1 Claim 32 (new): The method of claim 19 wherein the disease is selected from
2 cancer, heart disease, autoimmune disease, viral infection, Alzheimer's disease and diabetes.

1 Claim 33 (new): The method of claim 19 wherein the biological sample is
2 selected from tissue, blood, urine, stool, lymph, cerebrospinal fluid and interarticular fluid.

1 Claim 34 (new): The method of claim 19 wherein the biological sample is
2 derived from a pathological cell.

1 Claim 35 (new): The method of claim 19 wherein the adsorbent is a hydrophobic
2 adsorbent.

1 Claim 36 (new): The method of claim 19 wherein the adsorbent is a thiophilic
2 adsorbent.

1 Claim 37 (new): The method of claim 19 wherein the adsorbent is a normal
2 phase adsorbent.

1 Claim 38 (new): The method of claim 19 wherein the adsorbent is an anionic
2 adsorbent.

1 Claim 39 (new): The method of claim 19 wherein the adsorbent is a cationic
2 adsorbent.

1 Claim 40 (new): The method of claim 19 wherein the adsorbent is a metal ion
2 adsorbent.

1 Claim 41 (new): The method of claim 19 wherein the adsorbent is a glycoprotein
2 interaction adsorbent.

1 Claim 42 (new): The method of claim 19 wherein the adsorbent comprises a
2 nucleic acid.

1 Claim 43 (new): The method of claim 19 wherein the adsorbent comprises an
2 antibody or antibodies that bind the diagnostic marker or markers.

1 Claim 44 (new): The method of claim 20 further comprising providing a
2 diagnosis of the disease based on detection of the diagnostic markers.

1 Claim 45 (new): The method of claim 20 wherein the disease is selected from
2 cancer, heart disease, autoimmune disease, viral infection, Alzheimer's disease and diabetes.

1 Claim 46 (new): The method of claim 20 wherein the biological sample is
2 selected from tissue, blood, urine, stool, lymph, cerebrospinal fluid and interarticular fluid.

1 Claim 47 (new): The method of claim 20 wherein the biological sample is
2 derived from a pathological cell.

1 Claim 48 (new): The method of claim 20 wherein the adsorbent is a hydrophobic
2 adsorbent.

1 Claim 49 (new): The method of claim 20 wherein the adsorbent is a thiophilic
2 adsorbent.

1 Claim 50 (new): The method of claim 20 wherein the adsorbent is a normal
2 phase adsorbent.

1 Claim 51 (new): The method of claim 20 wherein the adsorbent is an anionic
2 adsorbent.

1 Claim 52 (new): The method of claim 20 wherein the adsorbent is a cationic
2 adsorbent.

1 Claim 53 (new): The method of claim 20 wherein the adsorbent is a metal ion
2 adsorbent.

1 Claim 54 (new): The method of claim 20 wherein the adsorbent is a glycoprotein
2 interaction adsorbent.

1 Claim 55 (new): The method of claim 20 wherein the adsorbent comprises a
2 nucleic acid.

1 Claim 56 (new): The method of claim 20 wherein the adsorbent comprises an
2 antibody or antibodies that bind the diagnostic marker or markers.

1 Claim 57 (new): The method of any of claims 19, 20 and 31-56 wherein the
2 marker or markers comprise a polypeptide.

1 Claim 58 (new): The method of any of claims 19, 20 and 31-56 wherein the
2 marker or marker comprises a nucleic acid.

1 Claim 59 (new): The method of any of claims 19, 20 and 31-56 wherein
2 desorption spectrometry is laser desorption/ionization mass spectrometry.

1 Claim 60 (new): The method of claim 57 wherein desorption spectrometry is
2 laser desorption/ionization mass spectrometry.

1 Claim 61 (new): The method of claim 58 wherein desorption spectrometry is
2 laser desorption/ionization mass spectrometry.